

542,136

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number  
**WO 2004/066504 A1**

(51) International Patent Classification<sup>7</sup>: **H03M 1/38**

(21) International Application Number:  
PCT/IB2004/050007

(22) International Filing Date: 12 January 2004 (12.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03100094.6 17 January 2003 (17.01.2003) EP  
03102127.2 11 July 2003 (11.07.2003) EP

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Greoewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **VAN TUIJL, Adrianus, J., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

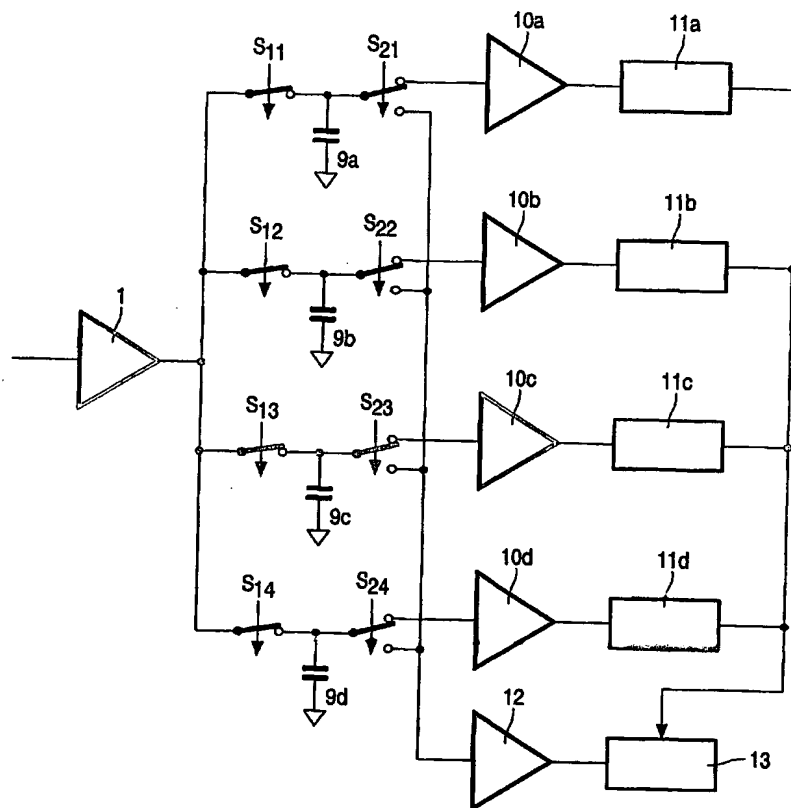
(74) Agent: **DUIJVESTIJN, Adrianus, J.**; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,

[Continued on next page]

(54) Title: **AN ANALOG-TO-DIGITAL CONVERSION ARRANGEMENT, A METHOD FOR ANALOG-TO-DIGITAL CONVERSION AND A SIGNAL PROCESSING SYSTEM, IN WHICH THE CONVERSION ARRANGEMENT IS APPLIED**



(57) Abstract: An analog-to-digital conversion arrangement for converting an analog input signal into a digital output signal with a most significant part and a least significant part comprises sample means for sampling the analog input signal, a plurality of coarse resolution analog-to-digital converters for converting the sampled analog input signal into a coarse digital signal representing the most significant part of the digital output signal, whereby the coarse resolution analog-to-digital converters are operated in an interleaved way. The analog-to-digital conversion arrangement further comprises a fine resolution analog-to-digital converter for converting the sampled analog input signal into a fine digital signal representing the least significant part of the digital output signal, based upon the coarse digital signal generated by any of said coarse resolution analog-to-digital converters.

WO 2004/066504 A1